

AUTOMOTIVE
SECTION

DOOM OF SOLID TIRES IS FORECASTED

AUTOMOTIVE
SECTIONDOOM OF SOLID
TIRES FORECAST

Will Be Obsolete in Three Years,
Declares President of Good-
year Company.

That solid tires for motor trucks will be obsolete within three years, street cars will soon be replaced by motor buses and freight cars given close competition by motor trucks on long hauls, were the predictions made by P. A. Seiberling, president of the Goodyear Tire and Rubber Company,

and P. W. Litchfield, factory manager, at a banquet given the Detroit and Cleveland sections of the Society of Automotive Engineers in Akron recently. More than 200 of the foremost designers heard Mr. Seiberling's prophecy that within the lifetime of those present the United States would be criss-crossed by great highways of solid foundation to withstand any wear and that highways of less than 16 feet width would be unknown. He asserted that the ultimate tire would be cord—that there would be no fabric or solid tires. China as the future big market for tires was advocated by the speaker, who declared that the numerous post roads of stone would be excellent foundations for modern highways through that part of the Orient. He quoted statistics to show that 50 per cent of China's four million people are employed in transportation against 10 per cent in the United States, and predicted a Celestial kingdom of motor transportation.

Our On-the-Minute
Service Truck

Will Attend To Your Emergency TIRE TROUBLES

Promptly

Day or Night Service
SUNDAYS AND HOLIDAYS

We Charge But Fifty Cents For This Service

Firestone Service Station
Vulcanizing and Repairing
Rims, Parts and Accessories

National Service Company
1610 14th Street N. W.

Just Call North 1290

CUT THIS OUT AND KEEP IN CAR

Railroads cannot be built because of violating Chinese traditions in crossing burial places with the right of way. Mr. Litchfield declared that the trolley must go, stating that it has reached a point where it cannot compete with the motor bus. For financial reasons extensions are impossible, so the street car must give way to the gas-driven vehicle that can aid development of suburbs without heavy investment in franchises and equipment.

Increase in traffic has sounded the deathknell of the trolley, according to Mr. Litchfield. Streets cannot easily be widened to give more track room continuous traffic movement is imperative. Therefore the whole street service must be utilized by a carrier that can go to the curb to take on or discharge passengers—the trolley must go underground as in London. If it remains in existence, the Goodyear factory manager pointed out the immobility of freight cars and delays necessitated in waiting to make up trains for given destinations. In contradistinction he indicated the mobility of the motor truck and predicted that with permanent highways and cord tire equipment, the motor truck will replace the freight car on long hauls. Mr. Litchfield asserted that the world war had put Europe fifty years ahead in transportation, and with this future for the industry in mind, design large capacity carriers to replace the street car.

STARTERS
GENERATORS

Our dear little repair shop is made up of 100 per cent leather necks and doughboys, and, believe me, they're some fixers. If you don't believe, ask the Germans. They know.

VERMONT GARAGE,
Rear 1120 Vermont Ave. N. W.

Radiator
Repairs

OF ALL KINDS
Bring Us Your Frozen Radiator

We Treat Your Radiator
And Pocketbook Right.

Will make a new radiator out of your old one at 1/2 the price of a new one.

Honeycomb Radiators
For Ford Cars

Guarantee Radiator
& Lamp Co.

1411 14th St. N. W.
Fk. 5236

1920 AUTO TAGS
RECEIVED TODAY

Distribution Begins Monday.
Car Owners Warned No
Extension Likely.

Automobile license tags for 1920 will be ready at the District building for distribution beginning next Monday. A partial shipment of 23,000 tags was received today. Wade H. Coombs, superintendent of licenses, announced. Distribution of motorcycle tags will begin at a later date. Automobileists are urged to obtain their tags before January 1, when the old license expires. Heretofore, the license superintendent has extended, for one month past expiration date, the time for securing a new tag. This was done because of the failure to receive the tags from the manufacturer in time for early distribution. With the early shipment, Superintendent Coombs states there is little possibility of the time being extended this year.

The new tag has a white background with black numerals. It is the same size as used in previous years. Applicants for licenses must secure the engine number and make's of the District building, says superintendent. "Our clerical force is short," says Mr. Coombs, "and we will not have time to go through our files to learn make's and engine numbers of cars. Applicants should come prepared with all information. It is also urged that names and addresses be written very plainly on applications. Trouble has been experienced last year in reading names and addresses." During the past year more than 47,000 tags were distributed. The cost of licenses are: 24-horsepower and under, \$3; from 25 to 30 horsepower, \$5; and more than 30-horsepower, \$10.

NEW CONCERN ENTERS
AUTO ACCESSORY FIELD

Interstate Motor Supply Company
Will Be Among Largest in
Washington.

The Interstate Motor Supply Company, 1324 New York avenue, is a new acquisition to Washington's fast increasing accessory field. As regards the amount of floor space, they can be easily ranked as the largest in Washington, and they also have the advantage of being very centrally located.

The firm is composed of W. H. Trolinger, president, formerly in the hardware and banking business at Pulaski, Va.; S. W. Baldwin, vice president and general manager, who for eleven years was engaged in the automobile business at North Adams, Mass.; and John W. Price, secretary, a former prominent attorney of Bristol, Va., now practicing in Washington.

In addition to a full line of accessories, the new firm has secured the agency for the Delton hand-

made tire, manufacturer at Trenton, N. J. They have also established a U. S. L. battery service, and have equipped a modern electrical shop with experts in charge. They have also installed a very complete battery for vulcanizing and retreading, sufficiently large to take care of this very important factor in the reduction from an automobile's standpoint, of the H. C. of L. Bringing, as they do, to Washington a high business reputation, coupled with expert experience and a strong financial standing, a brilliant future seems assured for the new firm.

SHOW FILM OF TRUCK
TRIP ACROSS COUNTRY

The Autocar Sales and Service Company, Pennsylvania avenue and Thirteenth street, entertained about seventy-five of their friends Tuesday evening, December 9, with views on screen showing numerous points of interest touched on the transcontinental tour made by one two-ton and one three-and-a-half-ton Autocar truck, leaving Washington June 16 of this year, to establish the endurance ability of their new three-and-one-half-ton model.

The filming of this tour was a unique undertaking and the pictures will serve as a guide to any who may attempt a similar feat in the future. The possibilities in long distance hauling by truck and the ability of trucks to sustain themselves en route were clearly demonstrated in this series of pictures.

An interesting feature was the comparative merits of pneumatic and solid tires in truck service brought out in the pictures and by the oral comments of Mr. Cummer, president of the Washington branch and host of the evening. Inasmuch as the use of pneumatic tires on trucks is common in its infancy, it will be of interest to note that the tire experience of this trip proved conclusively the advantages of pneumatics.

The trip from Washington to San Francisco was made in twenty-nine and one-half days, which includes nine days consumed in side trips and detours, and only once on the entire trip was it necessary to have outside assistance for repairs. This is a record and the Autocar Company is to be congratulated on both the success of the project from an endurance standpoint and the preservation in pictures of their trucks' performance.



Motorists who use their cars all winter should be careful to see that their batteries are kept properly charged. A battery which is allowed to deteriorate or become even partially discharged is far more likely to freeze than one which is kept in good condition, as may be readily realized by comparing the following freezing points:

Specific Gravity.	Battery Condition.	Freezing Point.
1.280	Full	70° below zero
1.260	3/4 discharged	60° below zero
1.240	1/2 discharged	50° below zero
1.160	3/4 discharged	20° below zero
1.120	Empty	20° above zero

Do not try to clean the headlight reflectors with an ordinary cloth, because you are apt to scratch the highly sensitive surface and do more harm than good. The best way to polish them is to first sponge them off lightly with a soft wet cloth so as to remove all loose dirt. When dry, take a piece of dampened chamol and dip it in jeweler's rouge, and then polish the reflector with a spiral or circular motion, starting at the center. You will be surprised what a difference clean reflectors will make in the light reflected upon the road.

Spring shackles and spring bolts are quite prone to wear, as they are

FORD OWNERS, NOTICE



The O-L-O Manifold Heater instantly starts Ford Cars in coldest weather. Heats a spot on Manifold, vaporizing gasoline immediately, thereby insuring quick starting. Have Your Back To The Rear Crankings. Price \$2. Money refunded if not satisfactory. Hartley-Farrell, Bourse, Phila. Agents Wanted. Phone Lombard 1878

Washington Office,
1302 F St. N. W.
John N. Gwin, Jr., Manager.
Phone Main 8715

On sale by the following dealers:

- JOHN R. ESPEY,
1006 Pa. Ave. N. W.
- CAPITOL CITY GARAGE,
410 8th St. N. W.
- FEDERAL AUTO SUPPLY CO.,
477 Pa. Ave. N. W.
- CENTRAL AUTO SUPPLY CO.,
1004 Pa. Ave. N. W.
- SPEEDWAY AUTO SUPPLY CO.,
332 14th St. N. W.
- ENTERPRISE SUPPLY CO.,
1210 New York Ave.
- CAPITOL GASOLINE STATION,
1st & Md. Ave. S. W.
- UPTOWN AUTO SUPPLY CO.,
18th and California Ave. N. W.
- BOYD TIRE & SUPPLY CO.,
650 Pa. Ave. S. E.
- IRVING COURT GARAGE,
1412 Irving St. N. W.
- MULCAHES TIRE SHOP,
1222 14th St. N. W.
- BAILEY'S AUTO SUPPLY CO.,
3001 14th St. N. W.
- MID CITY AUTO SUPPLY HOUSE,
1505 M St. N. W.
- WISCONSIN AUTO SUPPLY CO.,
1205 Wisconsin Ave. N. W.
- FEDERAL GARAGE,
1609 30th St. N. W.

always exposed to road dust and mud. This grit works in around the shackles and into the bearing with the result that wear ensues and before long those annoying rattles and squeaks develop.

This wear can be deferred considerably if proper and frequent attention is given to lubrication of these parts. Grease and oil cups are put on spring bolts for a purpose but many drivers seem to forget they are there or at least neglect them until they begin to squeak.

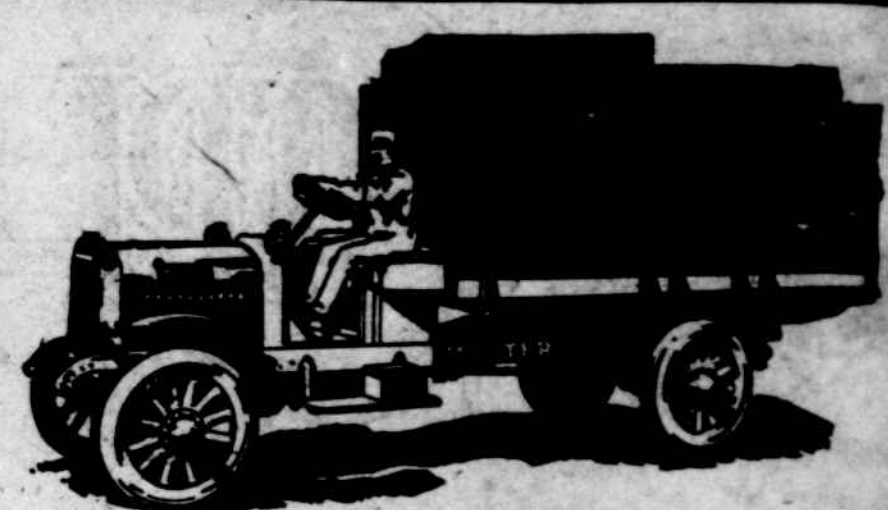
Although wear of the spring bolts generally results from neglect on the part of the driver to supply sufficient lubrication, nevertheless it is sometimes due to the fact that the holes are clogged from some cause at the factory so that even with the most frequent attention, no lubricant can reach the moving parts. Consequently wear goes on rapidly. To obviate trouble from this cause, it is well after receiving a new car to run a wire through the oil or grease holes in the spring bolts to make sure they are clear.

The best way, of course, to prevent squeaks and rattles is to keep the parts well lubricated so that they will not wear, because wear causes looseness and looseness causes rattles. However, it is impossible to prevent the spring bolts and shackles wearing eventually because of their exposure to road dirt, and when they become too loose the only thing to do is to replace bushings or bolts or both.

Rattles are frequently caused by the shackles wearing in the holes and on the sides so that they allow side play of the spring. On some types of construction the nuts may be set up tighter to take up this wear and on others it can be compensated for by pitting in washers of the correct thickness. It is just as important to use washers that fit properly as it

is to maintain a correct working relation between the bolt and the bushing or spring eye if rattling and wear are to be avoided. The washers should be perfectly flat and a good

fit on the bolt. Care must be taken that they are not too thick or binding will result, destroying in effect much of the riding qualities of the springs.



For Work Around a Lumber Mill

—just as in every other business where goods must be moved, Motor Trucks are essential, and, for best efficiency, MASTER Trucks.

Not merely because they are more powerful, more strongly built, and more practical; they are all these; but because they combine, as no other Trucks have yet combined, all the most desirable qualities of super-endurance, super-ability and super-value.

MASTER
TRUCKS

are built by practical men who have made a lifetime study of the business. They contain the best elements known to Truck engineering. Their design includes the very parts and materials which you, if a Truck-manufacturing expert, would choose for an ideal Truck. Buda Motors, Timken Axles, Timken Bearings, Brown-Lipe Clutches and Transmissions, Parrish and Bingham pressed-steel frames—these are a few of them.

The men who united these incomparable details into a perfect whole with a master's skill are practical engineers of 16 years' experience in Motor Truck building. You can see what the quality of Master Trucks ought to mean. Let us show you what it does mean in superior performance and lasting value!

GENERAL AUTO TRUCK CO.

21st and Virginia Ave. N. W.

Phone West 2166

A Winter Essential—

JOHNSON'S FREEZE-PROOF

JOHNSON'S FREEZE-PROOF is essential to winter driving. The present high price of alcohol—its low boiling point—quick evaporation and inflammability make it impractical. Use Johnson's Freeze-proof, then forget there is such a thing as a frozen radiator. Leave your radiator uncovered on the coldest day—leave your car at night in an unheated garage—IT CAN'T FREEZE. Radiator trouble and worry is a thing of the past.

For Trucks

Truck and fleet owners will find Johnson's Freeze-Proof a great time and money saver. Your trucks will always be on the job and in the coldest weather it will be "Business as Usual" for you. One application lasts all winter, unless the solution is lost through the overflow pipes or leakage. Price per package, \$1.50

Motor In Comfort With

"STEER WARMS"

Cold hands have always been the bugbear of winter motorists, but with Steer Warms you can put on light gloves or mittens and drive for hours in perfect comfort.

Steer Warms operate on the same principle as an electric heating pad. They are simple, neat and efficient.

Price for Ford Cars, \$5. Price for Other Makes, \$7.50.

A Christmas Suggestion

Make your autoist friend a gift of "Pyrene"—the fire extinguisher that saves 15% on auto insurance. He should have one for his garage as well as his machine.

BRASS—\$10

NICKEL—\$11

Insure Your Ford Against Motor Trouble With the
BOYCE MOTO-METER

The Boyce Moto-Meter is the only Ford accessory that pays back in dividends one hundred times its original cost.

Once you install this Boyce Moto-Meter and enjoy its benefits, you will never again drive a Ford, or any other car, without one.

It will signal you that more water is needed in the radiator ten to fifteen minutes before the radiator starts steaming.

Special Model for Ford Cars, \$2.75

It will indicate the need of more lubrication long before the motor actually is in danger. Put a Boyce Moto-Meter on your car today. It deserves one. Priced \$2.75 to \$10

Everything
Motorist

NATIONAL ELECTRICAL
SUPPLY COMPANY
1320-50 NEW YORK AVE. MAIN 6800

The Store
for Things
Electrical

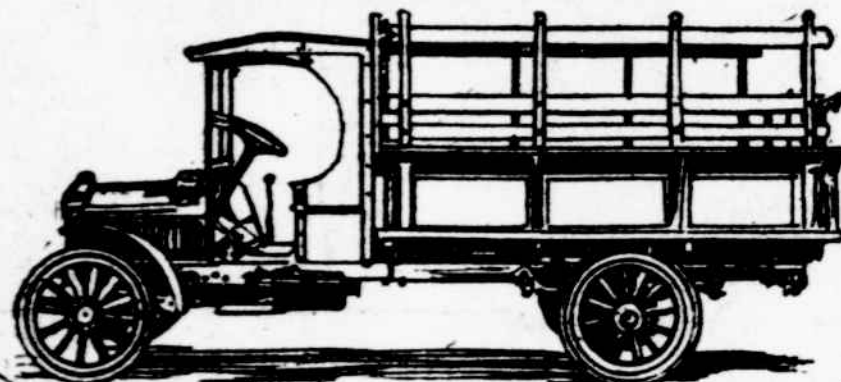
DIAMOND T
THE NATIONS FREIGHT CAR

REGARDLESS of what we may say about the Diamond T motor, we feel that mere words are unexpressive. No advertising could do it justice. The real test of a motor is in running it yourself—day after day, year after year. The actual performance of Diamond T trucks will surpass the advertising.

Consider power. There is no guesswork in the statement we are about to make. It is a cold, hard fact, based on experiments of our engineering department. The F. S. motor has the highest maximum curve power of any motor in a 1 1/2-ton truck. In actual test it showed 13 1/2 per cent more power than any other 1 1/2-ton truck motor.

ANNOUNCING
THE NEW
MODEL F-S
1 1/2 Ton

COMPLETE WITH 3-WAY BODY, CAB
AND WINDSHIELD—PAINTED



\$2575
DELIVERED

\$2575
DELIVERED

MODEL T
SAME TRUCK
WITHOUT BODY
\$2350

FLEET OWNERS
Standard Oil Co.
Piggly Wiggly Stores.
American Railway Express.
Texas Oil Co.
American Can Co.
U. S. Navy.

FLEET OWNERS
United Cigar Stores.
Sinclair Oil Co.
Coca Cola Co.
Brunswick-Balke-Collender Co.
Libby, McNeil & Libby.
Montgomery Ward & Co.

FORST BROTHERS, Inc.

DISTRIBUTORS

GENERAL OFFICES

1315 NEW YORK AVENUE N. W.

WASHINGTON, D. C.

BRANCHES

322 Grunby Street,
Norfolk, Va.
Corner Broad and Brown
Streets
Philadelphia
117 South Negley Avenue
Pittsburgh, Pa.

